**Chemistry 10 Review**

**Definitions:**

1. Fusion
2. Fission
3. Valence Electrons
4. Reactant
5. Products
6. Acid
7. Base
8. pH Scale
9. Neutralization

**Theories:**

* Aufbau’s principle
* Pauli exclusion principle
* Hund’s rule
* Conservation of mass

Complete the following Table:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Element Name** | **Element Symbol** | **Atomic Number** | **Atomic Weight** | **Period** | **Group** | **State** | **Family** | **Number of Neutrons** | **Number of Electrons** | **Number of Protons** |
| Calcium |  |  |  |  |  |  |  |  |  |  |
|  |  | 38 |  |  |  |  |  |  |  |  |

**Name and classify the following compounds:**

1. H2O
2. NO2
3. Ba3N2
4. ZnO
5. Ti3­N2
6. CrSO4
7. H3PO4
8. HCl
9. HClO2
10. Co(OH)3
11. NaOH

**Classify and write the formulas for the following compounds:**

1. Diphosphorus trichloride
2. Carbon monoxide
3. Lithium oxide
4. Sodium phosphate
5. Iron (II) oxide
6. Lead (III) nitrate
7. Calcium hydroxide
8. Manganese (II) hydroxide
9. Nitric acid
10. Hydrobromic acid
11. Nitrous acid

**Balance the following chemical reactions:**

1. K2O + H2O → KOH
2. H2O2 → H2O + O2
3. Al + O2 → Al2O3
4. Al + S8 → Al2S3
5. Al(OH)3 + HBr → AlBr3 + H2O
6. Al(OH)3 + H2CO3 → Al2(CO3)3 + H2O
7. Dicarbon dihydride combines with oxygen gas to produce carbon dioxide and water.
8. Carbon and water combine to create carbon monoxide and hydrogen gas.
9. Potassium chlorate disassociates to create potassium perchlorate and potassium chloride.
10. Rubidium combines with rubidium nitrate to crate rubidium oxide and nitrogen gas.

**Reaction Identification:**

Identify the reactions from the previous question.

**Draw a Lewis Structure for:**

1. Carbon
2. Selenium
3. Oxide
4. Calcium ion

**Construct a Bohr-Rutherford Diagram for:**

1. Fluorine
2. Magnesium ion

**Electron Configuration:**

1. Standard Notation
2. Bromine
3. Platinum
4. Beryllium ion
5. Fluoride
6. Short-Hand Notation
7. Gold
8. Arsenic
9. Iodide
10. Cesium ion

**Orbital Diagrams:**

1. Sodium
2. Aluminum

**Predict the product created from the fusion of:**

1. Praseodymium and Lithium